

Chapter One: Introduction

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Chapter One: Introduction

The state of Alaska is offering an exploration license within the Nenana Basin Study Area (Figure 1.1) to Andex Resources, L.L.C. The study area consists of approximately 1,365,000 acres; the license area encompasses approximately 483,000 acres. Only lands for which the state owns the subsurface can be included in this exploration license (see discussion in Chapter Two).

A. Exploration Licensing

Exploration licensing supplements the state's conventional oil and gas leasing program by targeting areas outside of known oil and gas provinces (the North Slope, Beaufort Sea and Cook Inlet).¹ The intent of licensing is to encourage exploration in areas far from existing infrastructure, with relatively low or unknown hydrocarbon potential, where there is a higher investment risk to the operator. Lease sales held in some of these higher-risk areas have attracted little participation, the deterrent being the bonus money one has to pay in order to win the lease. Exploration licensing gives an interested party the exclusive right to conduct oil and gas exploration without this initial expense. Through exploration licensing the state will receive valuable subsurface geologic information on these regions and, should development occur, receive additional revenue through royalties and taxes. These areas of the state are more likely to yield gas rather than oil and any reserves discovered could provide a source of energy for local consumption.

The licensing process is initiated in one of two ways:

- Each year during April applicants may submit to the commissioner a proposal to conduct exploratory activity within an area they have specified; or
- The commissioner can, at any time, issue a notice requesting the submission of proposals to explore an area he has designated.

Any proposal received by the commissioner must designate how much money the licensee would spend on exploration (the work commitment) and the term (duration) of the license. The proposal need not describe the type of exploration activity the licensee will conduct. However, before any exploration activity may occur, it must first go through the normal permitting processes described in this chapter.

Within 30 days after receiving a proposal for an exploration license, the commissioner must either reject it in a written decision, or give public notice of ADNR's intent to evaluate the acceptability of the proposal. The commissioner must also solicit comments on the proposal, and request competing proposals. AS 38.05.133(d).

¹ All state-owned land or state-selected land, including Alaska Mental Health Trust land managed on behalf of the trust by ADNR, is open to exploration licensing, except:

- 1) all land north of the Umiat Baseline,
- 2) land subject to the Cook Inlet areawide oil and gas lease sales,
- 3) all submerged lands in and around Bristol Bay, from Ugashik Bay north to the western boundary of Kulukak Bay,
- 4) the Alaska Peninsula/Aleutian Island chain south of 55° 30' north latitude, and
- 5) all land east of 138° west longitude. AS 38.05.131.

If there is a determination to evaluate the acceptability of a proposal, Division of Oil and Gas (DO&G) staff will develop a preliminary finding as to whether issuing a license is in the state's best interests. The public has an opportunity to review and comment on the preliminary finding. DO&G staff must consider and research all comments received and make changes for the subsequent final finding as necessary. A Finding under AS 38.05.035(e) must include a summary of agency and public comments regarding the disposal and include an ADNR response.

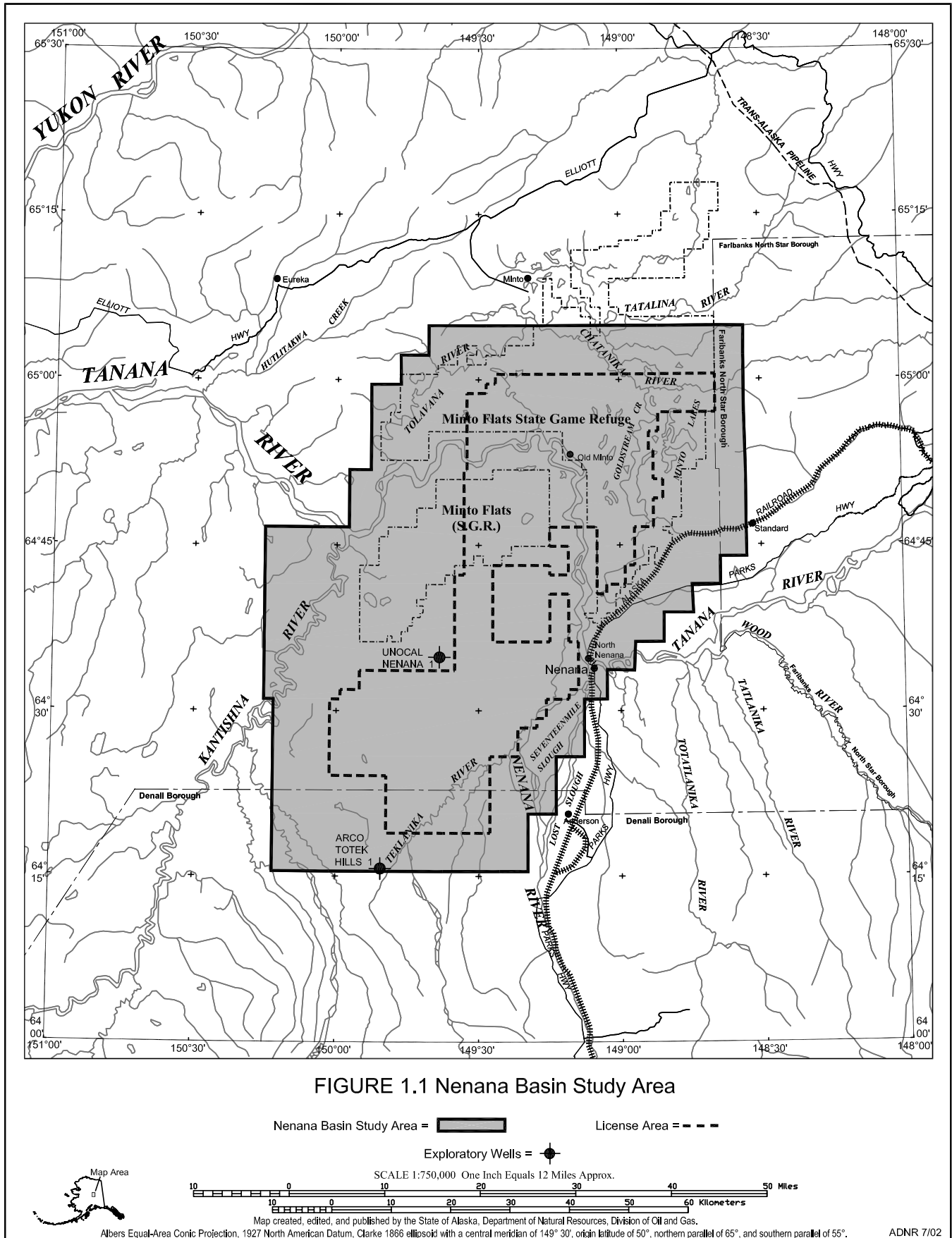
The final finding will describe the license area, set the term of the license ² (both may be different from what the applicant proposed), and the conditions placed on the license area. When there are no competing proposals, the finding must also identify the prospective licensee. If there is more than one proposal submitted the amount of the work commitment is kept confidential, as is the identity of each applicant. If the finding concludes that issuing an exploration license would be in the best interests of the state, the commissioner will request that each applicant submit a new proposal in the form of a sealed bid. Maintaining confidentiality is necessary so as not to influence the final bids. The applicant submitting the highest bid will be awarded the license.

Though the outcome of a lease sale or the exploration licensing process is the same — giving the highest bidder the exclusive right to explore a given area once the appropriate state and federal permits have been issued — there are significant differences between the two programs:

1. Leasing - prospective lessees submit a bonus bid based on dollars per acre, with the highest dollar per acre bid winning the lease. The money goes to the state.
Licensing -- the prospective licensee bids direct exploration expenditures, called a work commitment. This money reflects the amount that will be spent on exploration; it does not go to the state.
2. Leasing - the lessee is not bound to conduct any exploration on a lease. If a lessee does conduct exploratory activity, he can initiate it at anytime during the term of the lease.
Licensing -- exploration over some portion of the license area is guaranteed. The licensee must spend at least 50 percent of the bid amount within four years, or relinquish 25 percent of the license area to the state, with an additional 10 percent being relinquished each successive year. If the licensee fails to spend at least 25 percent of the bid amount within four years, the license is terminated and the balance of the bid amount is forfeited to the state.
3. Leasing - annual lease rentals begin when the lease is issued, starting at \$1 per acre and increasing annually to a maximum of \$3 per acre.
Licensing - the licensee pays a \$1 per acre licensing fee. There is no rental income during the life of the license.

Once the work commitment has been met, i.e., exploration expenditures equal the amount committed by the licensee, and if the licensee requests, the commissioner will convert all or a portion of the remaining license area to standard oil and gas leases. Royalty rates on these leases must be at least 12.5 percent, and the annual rental rate is \$3 per acre.

² An exploration license can range from 10,000 to 500,000 acres, and can have a term of up to 10 years.



1. Statutory Background

The Alaska Constitution provides that the state's policy is "to encourage . . . the development of its resources by making them available for maximum use consistent with the public interest" and that the "legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the State, . . . for the maximum benefit of its people" (Alaska Constitution, art. VIII, §§ 1, 2). To comply with this provision, the legislature enacted Title 38 of the Alaska Statutes (AS 38) and directed ADNR to implement the statutes.

Alaska Statutes 38.05.035 and 38.05.131-.134 govern the issuance of an exploration license and include the public notice requirements referred to in this document (AS 38.05.945). Under AS 38.05.035(e), ADNR may not dispose of state land, resources, property, or interests, unless the director first determines in a written finding that such action will serve the best interests of the state. This written finding is known as a "best interest finding" and is a written analysis which describes for the public the facts and applicable laws, which are relevant to the disposal and gives a decision based on those factors. The finding is required to discuss all material issues that were raised during the period allowed for receipt of public comment. Two documents are issued by DO&G: a Preliminary Best Interest Finding, which is published for public review and comment, and subsequently, a Final Best Interest Finding.

AS 38.05.035(e) prescribes what, at minimum, must be in these findings. In addition, AS 38.05.035(g) lists the topics that DO&G must consider and discuss in the best interest finding analysis for an exploration license:

- i. Property descriptions and locations;
- ii. The petroleum potential of the license area, in general terms;
- iii. Fish and wildlife species and their habitats in the area;
- iv. The current and projected uses in the area, including uses and value of fish and wildlife;
- v. The governmental powers to regulate oil and gas exploration, development, production, and transportation;
- vi. The reasonably foreseeable cumulative effects of oil and gas exploration, development, production, and transportation on the license area, including effects on subsistence uses, fish and wildlife habitat and populations and their uses, and historic and cultural resources;
- vii. Stipulations and mitigation measures, including any measures to prevent and mitigate releases of oil and hazardous substances, to be included in the license and any subsequent leases, and a discussion of the protections offered by these measures;
- viii. The method or methods most likely to be used to transport oil or gas from the license area, and the advantages and disadvantages, and relative risks of each;
- ix. The reasonably foreseeable fiscal effects of the exploration license and the subsequent activity on the state and affected municipalities and communities, including the explicit and implicit subsidies associated with the license, if any; and
- x. The reasonably foreseeable effects of oil and gas exploration, development, production, and transportation on the municipalities and communities within or adjacent to the license area.

Other laws and regulations applicable to oil and gas activities in Alaska can be found in Appendix B.

2. Public Participation

The public notice statute, AS 38.05.945, includes specific provisions for best interest findings. These include: publication of a legal notice in newspapers of statewide circulation and in newspapers of

general circulation in the vicinity of the proposed action; public service announcements on the electronic media serving the area to be affected by the proposed action; and one or more of the following methods: posting in a conspicuous location in the vicinity of the proposed action; notification of parties known or likely to be affected by the action; or another method calculated to reach affected parties.

In addition, AS 38.05.946 provides that a municipality, an Alaska Native Claims Settlement Act (ANCSA) corporation, or nonprofit community organization may hold a hearing, which the commissioner or his representative shall attend. The commissioner may also, at his discretion, hold a public hearing. After a final best interest finding is issued, an individual or organization may request reconsideration at the agency level in accordance with AS 38.05.035(i). A request for reconsideration of a best interest finding must be filed with the ADNR commissioner within 20 days after the final best interest finding is published. In order to file a request for reconsideration, a person must have "meaningfully participated" in the administrative review process and must be affected³ in some way by the final decision. The term "meaningfully participated" means that the person (1) submitted written comment during a public comment period; or (2) presented oral testimony at a public hearing (AS 38.05.035(i)). An issue must have been raised during a comment period (not necessarily by the individual seeking reconsideration), in order to be the basis for a request for reconsideration.

A person may appeal to the superior court only if the person requested reconsideration at the agency level. In addition, only those points raised in the request for reconsideration may be appealed (AS 38.05.035(l)). By requiring a party to exhaust the administrative review and reconsideration process before appealing to the superior court, the agency is given full opportunity to review, analyze, and respond to the appealed concerns prior to litigation. For the purposes of review, the person appealing must state and prove the defect alleged to exist within the best interest finding (AS 38.05.035(m)).

3. Best Interest Finding Scope of Review

The scope of review and best interest finding are based upon the facts and issues known, or made known, to the director. They may address only reasonably foreseeable, significant effects of the proposed uses to be authorized by the disposal (AS 38.05.035(g), AS 38.05.035(e)(1)(A)). Legislative history indicates that for an effect to be "reasonably foreseeable": (1) there must be some cause/result connection between the proposed disposal and the effect to be evaluated; (2) there is a reasonable probability that the effect will occur as a result of the disposal; and (3) the effect will occur within a predictable time after the disposal. These practical constraints eliminate speculation about potential but improbable future effects and focus the best interest finding on those effects most likely to occur as a result of the proposed disposal. For example, at the time ADNR prepares a best interest finding, it is impossible to predict whether, let alone when and where, development or production, or related facilities might result. This concept is embraced in AS 38.05.035(h), which states that "the director may not be required to speculate about future effects subject to future permitting that cannot reasonably be determined until the project or proposed use for which a written best interest finding is required is more specifically defined.

A reasonably foreseeable effect must also be "significant." Significant means a known and noticeable impact on or within a reasonable proximity to the area involved in the disposal. Public input assists in providing a body of information for the best interest finding review and analysis that is as complete as possible. Information provided by agencies and the public assist the director in:

- reviewing all of the facts and issues;

³ Alaska case law defines "a person affected by a decision" as someone who has a personal stake in the results of the decision. *Sisters of Providence v. Dept. of Health & Social Services*, 648 P. 2d 970, 974 (Alaska 1982).

- determining which are material to the decision of whether to issue an exploration license;
- establishing the scope of the review for that decision by determining the reasonably foreseeable, significant effects of licensing and subsequent leasing that arise from those material facts and issues; and
- balancing those effects to determine under what conditions, if any, issuing an exploration license for the area will serve the best interests of the state.

4. Phased Review

As authorized by AS 38.05.035(e)(1)(B) and (C), ADNR may also limit the scope of the finding. A best interest finding is limited to a discussion of facts known to the Director at the time the finding is prepared, and must be material to the issues set out in AS 38.05.035(g) or raised during a public comment period. For example, a finding will discuss the most likely methods of oil and gas transportation, with attention to the known physical and biological characteristics of the region. When, what kind, or where individual pipelines may be built cannot reasonably be determined at the time the license is issued. As a result, they are not specifically discussed. The statute also does not require speculation concerning possible future development, which like future pipelines, would be subject to an independent site-specific review and additional permitting requirements. Phased review recognizes that such speculation is unnecessary at the time a license is issued. Advances, or the lack of advances, in technology, along with unpredictable market changes, may determine whether production will occur and if so, the transportation particulars.

While the license gives the licensee the right to conduct geological and geophysical exploration, as well as the exclusive right to drill for, extract, remove, clean, process, and dispose of any oil, gas, or associated substances that may underlie the lands subject to license, the issuance of the license does not authorize any of these activities. Before any operation may be undertaken in the licensed area, the licensee is required to comply with all applicable statutes and regulations, and secure ADNR's approval of a plan of operations and all applicable permits

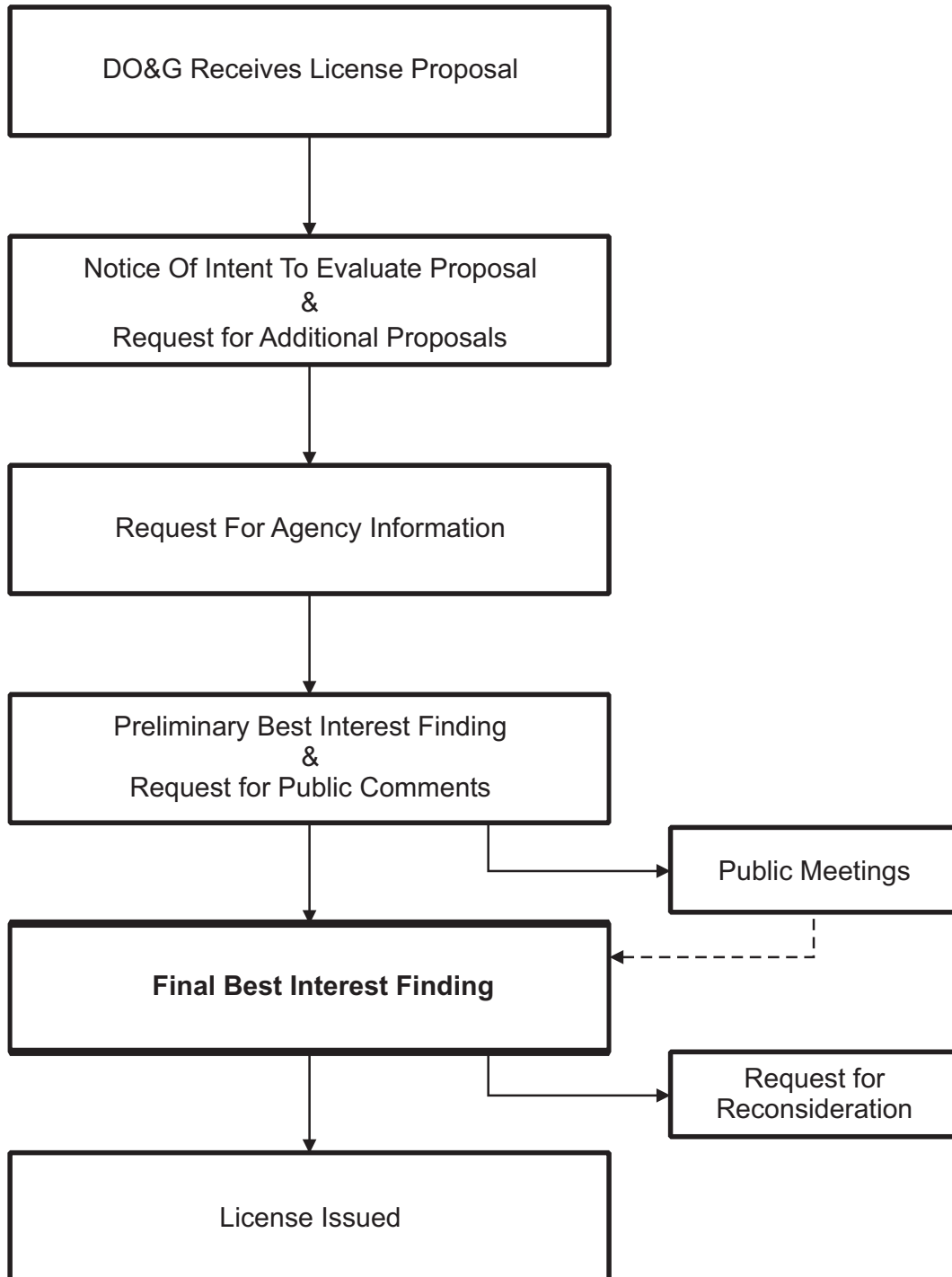
Plans of operations are required and must identify the specific measures, design criteria, construction methods, and standards that will be employed to meet the provisions of the exploration license. They are subject to extensive technical review by a number of local, state, and federal agencies. These plans are also available for public review. DO&G will give public notice of any plans of operation for development. Oil and gas exploration, development, or production-related activities are permitted only if the proposed operations comply with state and federal laws and the provisions of the license. Other permits must be prepared, and approved by the state for any later development or production phase.

B. Nenana Basin Exploration License

1. Public Process

In April 2001, DO&G received a request from Analex Resources, L.L.C. for an exploration license covering approximately 499,840 acres in the Nenana basin (Figure 1.1). On May 17, the division issued a "Notice of Intent to Evaluate" the proposal and the public was given 60 days in which to comment. At the same time, additional proposals were solicited. The division received no additional proposals. Following an evaluation of Analex's proposal, the division decided to proceed with a best interest finding. On July 3, 2001 the division issued a Request for Agency information to federal, state, and local government agencies, and Native organizations. Information provided was used to develop the preliminary finding that was released on April 12, 2002. A 50-day public comment period on the finding

FIGURE 1.2 Nenana Basin Exploration Licensing Public Process



ended on May 31. During the comment period DO&G conducted three public information meetings. At these meetings, which were held in Nenana, Minto and Fairbanks, representatives from Doyon and Andex gave a presentation, division staff provided an overview of the licensing and permitting procedures, and public comment was taken. Based on information received during this comment period, the division made the necessary revisions for the final finding. After reviewing this final finding and the conditions placed on the license, Andex will have an opportunity to either accept or reject the exploration license. Should Andex accept, the license will have an effective date of October 1, 2002.

2. Final Finding

This final finding follows a professional and technical review of social, economic, environmental, geological, and geophysical information about the Nenana basin. As previously explained, the scope of review in this finding is limited, under AS 38.05.035(e)(1)(B), to facts known to the director at the time of the preparation of the best interest finding and that are material to the matters set out in AS 38.05.035(g)(1)(B). ADNR is conditioning this best interest determination, and any licenses issued under it, with a number of mitigation measures designed to reduce or eliminate possible adverse effects, and to ensure that future exploration, development, production, and transportation activities will serve the best interests of the state. These mitigation measures have been developed by ADNR after consultation with other agencies, and through a review of material facts and issues, including the reasonably foreseeable cumulative effects of exploration, development, production, and transportation on the licensing area.

C. Governmental Powers to Regulate Oil and Gas Exploration, Development, Production and Transportation

All exploration licenses and subsequent lease activities (exploration, development, production, and transportation) are subject to numerous federal, state, and local laws, regulations, policies, and ordinances, with which the licensee is obligated to comply. This section cannot provide a comprehensive description of the multitude of laws and regulations that may be applicable to such activities, but it does provide an illustration of the broad powers of the various government agencies to prohibit, regulate, and condition activities related to oil and gas, which may occur within licensed areas. A list of important laws and regulations applicable to oil and gas activities is included in Appendix B. Each of the regulatory agencies (state, federal, and local) has a different role in the oversight and regulation of oil and gas activities. A sample exploration license and lease contract is contained in Appendix C and D, respectively.

Each license issued will grant the licensee exclusive rights to subsurface mineral interests. However, as discussed in the previous section, an exploration license does not authorize subsequent activities. The licensee's rights to drill for, extract, remove, clean, process, and dispose of any oil, gas, or associated substances that may underlie the lands described by the exploration license are subject to the terms of the license, plans of operation, and subsequent leases (see Chapter Seven), and all applicable state and federal laws and regulations.

Each agency requires various permits and approvals, which are presented below, with additional information on the review process (see Table 1.1). There is, however, no "typical" project. Actual processes, terms and conditions will vary with time-certain, site-specific operations. Each agency,

therefore, has field monitors assigned to ensure that operations are conducted as approved. The appropriate statutes and regulations should be consulted when specifics are required.

1. Alaska Coastal Management Program (ACMP) Review

The Nenana basin study area is outside a defined coastal zone, therefore any activity proposed will not undergo an ACMP review. However, before activities can commence under the terms of the license a plan of operation must be approved. DO&G will hold a pre-application meeting with the licensee to identify the agencies that will be issuing the appropriate permits and direct the licensee to those agencies.

In their permitting and approval process many other agencies have public notice requirements and routinely request comments from agencies, interest groups, and the public on how best to fulfill their regulatory objectives.

TABLE 1.1: Typical Permit Process - Exploration Wells - Interior Basin

ID	NAME	M	J	J	A	S	O	N	D	J	F	M	A	M
1	Preapplication Conference		<div></div>											
2	DNR Parks - Cultural Resource Survey		<div></div>											
3	DNR DO&G - Lease Plan of Operations Review				<div></div>	<div></div>	<div></div>							
4	DNR DMLW - Temporary Water Use Permit				<div></div>	<div></div>	<div></div>							
5	DNR DMLW - Land Use Permit for Access				<div></div>	<div></div>	<div></div>							
6	DEC - Oil Spill Discharge and Contingency Plan	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>							
7	DEC - Solid Waste Disposal Permit				<div></div>	<div></div>	<div></div>							
8	DEC - Certificate of Reasonable Assurance		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>							
9	DEC - Wastewater Disposal Permit				<div></div>	<div></div>	<div></div>							
10	DEC - Air Quality Construction Permit	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>							
11	ADFG - Title 16 Anadromous Fish Stream - Special Areas Permit				<div></div>	<div></div>	<div></div>							
12	Army Corps of Engineers - Section 404 Permit		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>							
13	AOGCC -Conservation Order - Permit to Drill						<div></div>	<div></div>						
14	AOGCC - Disposal Injection Order				<div></div>	<div></div>								
15	Construction and Drilling								<div></div>	<div></div>	<div></div>	<div></div>		
16	Demobilization and Rehabilitation												<div></div>	<div></div>
Project: Onshore														
Date: 4/4/02		Permitting Activity <div></div> Public Notice <div></div>												

2. Alaska Department of Natural Resources

ADNR, through DO&G, and the Division of Mining, Land and Water (DMLW), reviews, coordinates, conditions, and approves plans of operations or development and other permits as required before on-site activities can take place. The department monitors activities through field inspection once they have begun. Each plan of operations is site-specific and must be tailored to the activity requiring the permit. A plan of operations is required to identify the specific measures, design criteria, and construction methods and standards to be employed so as to comply with the terms of the license. Applications for other state or federal agency authorizations or permits must be submitted with the plan of operations.

a. Plan of Operations Approval

Land use activities within exploration licenses and subsequent oil and gas leases are regulated under 11 AAC 83.158 and paragraph 11 of the license contract. These require the licensee to prepare plans of operations and development that must be approved by ADNR through DO&G and by any other interest holder, if ownership is shared, before the licensee may commence any activities within the licensed area. Except for equipment uses exempted under 11 AAC 96.020, the licensee must prepare a plan of operations and obtain all required approvals and permits for each phase of exploration, development, or production prior to implementation of that activity. All permit applications and plans are available for public review and public notice will be given for all development plans of operation.

An application for approval of a plan of operations must contain sufficient information, based on data reasonably available at the time the plan is submitted in order for the commissioner to determine the surface use requirements and effects directly associated with the proposed operations. An application must include statements and maps or drawings setting out the following:

- the sequence and schedule of the operations to be conducted in the licensed area, including the date operations are proposed to begin and their proposed duration;
- projected use requirements directly associated with the proposed operations, including but not limited to the location and design of well sites, material sites, water supplies, solid waste sites, buildings, roads, utilities, airstrips, and all other facilities and equipment necessary to conduct the proposed operations;
- plans for rehabilitation of the affected area after completion of operations or phases of those operations; and
- a description of operating procedures designed to prevent or minimize adverse effects on other natural resources and other uses of the licensed area and adjacent areas, including fish and wildlife habitats, historic and archeological sites, and public use areas. 11 AAC 83.158(d).

When it considers the plan of operations ADNR often requires other stipulations, in addition to the mitigation measures developed at the time of preparation of the best interest finding. These stipulations address site-specific concerns directly associated with the proposed project. The license stipulations and the terms and conditions of the license are attached to the plan of operations approval and are binding on the licensee. Activities are field-monitored by ADNR, ADEC, ADF&G, and AOGCC to ensure compliance with each agency's respective permit terms. The license contract requires that the licensee keep the license area open for inspection by authorized state officials. Each permittee must post a \$500,000 statewide bond to cover a drill site. License and lease operations approvals are generally granted for three years.

b. Geophysical Exploration Permit

The geophysical exploration permit is a specific type of land use permit issued by DO&G (11 AAC 96.010). The purpose of the permit is to minimize adverse effects on lands and resources while making important geological information available to the state. Under AS 38.05.035(a)(9)(c), the geological and geophysical data that are made available to the state are held confidential at the request of the permittee.

Seismic surveys are the most common activity authorized by this permit. Since one does not have to have an exploration license or oil and gas lease in order to conduct a seismic survey, mitigation measures that address seismic activity are developed as part of the permitting process and are not typically attached to any lease or license. In this way, the measures affect all seismic surveys in an area, not just those being conducted by a licensee as part of a work commitment or by the owner of a lease. If the seismic survey is part of an exploration well program, the permit will be reviewed as part of the exploration well permit package. The application must contain sufficient detail to allow evaluation of the activities' effects on the lands and resources. A map showing the general location and routes of travel, and a description of the activity and equipment that will be used must be included. Maps showing the precise location of the survey lines must also be provided, though this information is usually held confidential. A \$100,000 bond is required for seismic activity. The bond amount for other geophysical surveys is determined when the activity is proposed.

The permit will contain measures to protect the land and resources of the area. The permit is usually issued for one year or less, but may be extended. If the permit is extended, the director may modify existing terms or add new ones. The permit is also revocable.

c. Pipeline Right-of-Way

Most transportation facilities within the license area or beyond the boundaries of the license area must be authorized by ADNR under the Right-of-Way Leasing Act, AS 38.35. This act gives the commissioner broad authority to oversee and regulate the transportation of oil and gas by pipelines, which are in whole or in part located on state land, to ensure that the state's interests are protected. The Joint Pipeline Office administers Right-of-Way Leasing Act permits. Some pipelines (e.g. pipelines that are not common carrier pipelines) are authorized under AS 38.05.850, rights-of-way issued by the Division of Mining, Land and Water. Some roads may also be authorized under DMLW rights-of-way.

d. Temporary Water Use Permit

Under 11 AAC 93.210 - 220, Temporary Water Use permits are issued by the DMLW and may be required for exploration activities. An application for a temporary water use permit must be made if the amount of water to be used is a significant amount as defined by 11 AAC 93.970(14), the use continues for less than five consecutive years, and the water applied for is not otherwise appropriated. The permit may be extended one time for good cause for a period of time not exceeding five years. The application must include: (1) the application fee; (2) a map indicating the location of the property, take point, and point of use; (3) the quantity of water to be used; (4) the nature of the water use; (5) the time period during which the water is to be used; and (6) the type and size of equipment to be used to withdraw the water. At the discretion of the commissioner, a temporary water use permit will be subject to conditions, including suspension and termination in order to protect the water rights of other persons or the public interest.

e. Permit and Certificate to Appropriate Water

Industrial or commercial use of water requires a Permit to Appropriate Water (11 AAC 93.120). The permit is issued for a period of time (not to exceed five years for industrial or commercial uses) consistent with the public interest and adequate to finish construction and establish full use of water. The commissioner will, in his discretion, issue a permit subject to conditions he considers necessary to protect the public interest. The conditions include, but are not limited to, conditions that reserve a sufficient quantity of water to achieve any of the following purposes: protection of fish and wildlife habitat, recreation, navigation, sanitation and water quality, protection of prior appropriations and for any other substantial public purpose.

A Certificate of Appropriation (11 AAC 93.130) will be issued if (1) the permit holder has shown that the means necessary for the taking of water have been developed; (2) the permit holder is beneficially using the amount of water to be certified; and (3) the permit holder has substantially complied with all permit conditions. Again, the commissioner will, in his or her discretion issue a certificate subject to conditions necessary to protect the public interest. For example, the applicant may be required to maintain a specific quantity of water at a given point on a stream or water body, or in a specified stretch of stream, throughout the year or for specified times of the year in order to protect fish and wildlife habitat, recreation, navigation or prior appropriations. 11 AAC 93.130(c)(1).

f. Land Use Permits

11 AAC 96.010 - .140. Land use permits are issued by DMLW and may be required for exploration, development and production activities. These permits have a term of up to five years. All land use activities are subject to the following provisions:

1. Activities employing wheeled or tracked vehicles shall be conducted in such a manner as to minimize surface damage;
2. Existing roads and trails shall be used whenever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, stumps, and snags. Due care shall be used to avoid excessive scarring or removal of ground vegetative cover;
3. All activities shall be conducted in a manner that will minimize disturbance of drainage systems, changing the character, polluting, or silting of streams, lakes, ponds, waterholes, seeps, and marshes, or disturbance of fish and wildlife resources. Cuts, fills, and other activities causing any of the above disturbances, if not repaired immediately, are subject to such corrective action as may be required by the director;
4. The director may prohibit the disturbance of vegetation within 300 feet of any waters located in specially designated areas as prescribed in 11 AAC 96.010(2) except at designated stream crossings;
5. The director may prohibit the use of explosives within one-fourth mile of designated fishery waters as prescribed in 11 AAC 96.010(2);
6. Trails and campsites shall be kept clean. All garbage and foreign debris shall be eliminated by removal, burning, or burial, unless otherwise authorized;
7. All survey monuments, witness corners, reference monuments, mining claim posts, and bearing trees shall be protected against destruction, obliteration, or damage. Any damaged or obliterated markers shall be reestablished in accordance with accepted survey practice of the division;
8. Every reasonable effort shall be made to prevent, control, or suppress any fire in the operating area. Uncontrolled fires shall be immediately reported;
9. Holes, pits, and excavations shall be filled, plugged, or repaired to the satisfaction of the director. Holes, pits, and excavations necessary to verify discovery on prospecting sites, mining claims, and mining leasehold locations may be left open but shall be maintained as required by the director;

10. No person may engage in mineral exploratory activity on land, the surface of which has been granted, licensed or leased by the state of Alaska, or on land for which the state has received the reserved interest of the United States until good faith attempts have been made to agree with the surface owner, licensee or lessee on settlement for damages which may be caused by such activity. If agreement cannot be reached, or the license or lease or surface owner cannot be found within a reasonable time, operations may be commenced on the land only with specific approval of the director, and after making adequate provision for full payment of any damages which the owner may suffer;
11. Entry on all lands under mineral permit, exploration license, lease, or claim, by other than the holder of the permit, exploration license, lease, or claim or his authorized representative, shall be made in a manner which will prevent unnecessary or unreasonable interference with the rights of the permittee, licensee, lessee, or claimant. Additional stipulations may be imposed.

g. Material Sale Contract

If the operator proposes to use state owned gravel or other substrate materials for construction of pads and roads, the operator must obtain a Division of Mining, Land and Water material sale contract. The contract must include, if applicable, (1) a description of the sale area, (2) the volume of material to be removed, (3) the method of payment, (4) the method of removal of the material, (5) the bonds and deposits required of the purchaser, (6) the purchaser's liability under the contract, (7) the improvements to and occupancy of the sale area required of the purchaser, (8) and the reservation of material within the sale area to the division, (9) the purchaser's site-specific operation requirements including erosion control and protection of water; fire prevention and control; roads; sale area supervision; protection of fish, wildlife and recreational values; sale area access and public safety. A contract must state the date upon which the severance or extraction of material is to be completed. The director at his discretion may grant an extension not to exceed one year. When determined by the director that a delay in completing the contract is due to causes beyond the purchaser's control, the contract will be extended for a time period equal to the delay.

The director, in his discretion, will require a purchaser to provide a performance bond based on the total value of the sale. The performance bond must remain in effect for the duration of the contract unless released in writing by the director.

3. Alaska Department of Environmental Conservation

ADEC has statutory responsibility for preventing air, land, and water pollution. Oil and gas activities, such as the disposal of drilling mud and cuttings, the flaring of hydrocarbon gases, and the discharge of wastewater, are regulated by this agency as well as AOGCC if the activity involves a class II injection well. Several separate written permits are required before activity can begin. Before solid waste disposal, wastewater or air quality permits are issued, two public notices and an opportunity for public comment (and a public hearing, if requested) are required.

a. Oil Discharge Prevention and Contingency Plan

Licensees must comply with the requirements of AS 46.04.010 - .900, Oil and Hazardous Substance Pollution Control. This requirement includes the preparation and approval by ADEC of an Oil Discharge Prevention and Contingency Plan (c-Plan). AS 46.04.030; 18 AAC 75.445. Details on the contents of the plan are in Chapter Six.

Prior to receiving a permit to drill, the licensee must demonstrate in the plan of operations the ability to promptly detect, contain, and cleanup any hydrocarbon spill before the spill affects fish and wildlife populations or their habitats. This includes the capability to drill a relief well in the event of a loss of well control. ADEC has authority under AS 46.04 for the purpose of preventing and cleaning up oil spills.

If transportation by water is planned, AS 46.04.030 requires that the licensee obtain the approval of ADEC for detailed oil spill contingency plans prior to the commencement of each aspect of the operation, including individual wells, drilling pads or platforms, pipelines, storage facilities, loading facilities, and individual tankers or barges.

b. Wastewater Disposal

Domestic greywater must be disposed of properly at the surface and a Wastewater Disposal Permit is required (18 AAC 72). Typically, waste is processed through an on-site plant and disinfected before discharge. ADEC sets fluid volume limitations and threshold concentrations for biochemical oxygen demand (BOD), suspended solids, pH, oil and grease, fecal coliform and chlorine residual. Monitoring records must be available for inspection and a written report may be required upon completion of operations.

c. Solid Waste Disposal Permit

Recent industry practice is to use methods other than surface reserve pits for disposal of drilling muds, such as injection wells, where possible. In addition, the majority of muds utilized today are water-based. When a well is drilled, muds and cuttings are initially either temporarily stored on a gravel pad or collected in a reserve pit pending final disposal by injection. Drilling muds and cuttings discharged into a reserve pit require pre-approval and a written permit. The permit addresses design, operation and closure concerns to ensure that unacceptable environmental effects are avoided.

Solid waste storage, treatment, transportation and disposal are regulated under 18 AAC 60. For all solid waste disposal facilities, a comprehensive disposal plan is required, which must include engineering design criteria and drawings, specifications, calculations and a discussion demonstrating how the various design features (liners, berms, dikes) will ensure compliance with regulations.

Before approval, solid waste disposal permit applications are reviewed for compliance with air and water quality standards, wastewater disposal and drinking water standards, as well as for their consistency with the Alaska Historic Preservation Act. 18 AAC 60.215. The application for a waste disposal permit must include a map or aerial photograph (indicating relevant topographical, geological, hydrological, biological and archeological features), with a cover letter describing type, estimated quantity and source of the waste as well as the type of facility proposed. Roads, drinking water systems and airports within a two-mile radius of the site must be identified, along with all residential drinking water wells within ½-mile. There must also be a site plan with cross-sectional drawings that indicate the location of existing and proposed containment structures, material storage areas, monitoring devices, area improvements and on-site equipment. An evaluation of the potential for generating leachate must be presented as well. For above-grade disposal options, baseline water-quality data may be needed to establish the physical and chemical characteristics of the site before installing a containment cell.

Non-drilling related solid waste must be disposed of in an approved municipal solid waste landfill (MSWL). MSWLs are regulated under 18 AAC 60.300-.397. All other solid waste (except for hazardous materials) must be disposed of in an approved monofill. 18 AAC 60.400-.495. A monofill is a landfill or

drilling waste disposal facility that receives primarily one type of solid waste and is not an inactive reserve pit. 18 AAC 60.990(81). An inactive reserve pit is a drilling waste disposal area, containment structure, or group of containment structures where drilling waste has been disposed of which the owner or operator does not plan to continue disposing of drilling waste. 18 AAC 60.990(61). Closure of inactive reserve pits is regulated under 18 AAC 60.440.

Drilling waste disposal is specifically regulated under 18 AAC 60.430. Design and monitoring requirements for drilling waste disposal facilities are identified in 18 AAC 60.430(c) and (d), respectively. Under 18 AAC 60.430(c)(1), "the design must take into account the location of the seasonal high groundwater table, surface water, and continuous permafrost, as well as proximity to human population and to public water systems, with the goal of avoiding any adverse effect on these resources." The facility must be designed to prevent the escape of drilling waste and leachate, prevent contamination of groundwater, and be of sufficient volume and integrity to prevent leakage due to erosion, precipitation, wind and wave action, and changing permafrost conditions. The plans for the proposed design and construction of the drilling waste disposal facility and the fluid management plan must be approved and signed and sealed by a registered engineer. 18 AAC 60.430(c)(5).

Today, the preferred practice is to dispose of drilling fluids by re-injection deep into the ground, however, limited discharge of waste streams may be authorized by EPA and ADEC under the NPDES permit system. All produced waters must be re-injected or treated to meet Alaska Water Quality Standards prior to discharge. However, before a well may be permitted under 20 AAC 25.005, a proper and appropriate reserve pit, also known as a solid waste disposal cell, must be constructed, or appropriate tankage installed for the reception and confinement of drilling fluids and cuttings, to facilitate the safety of the drilling operation, and to prevent contamination of ground water and damage to the surface environment. 20 AAC 25.047.

Typically, a reserve pit is a containment cell, lined with an impermeable barrier compatible with both hydrocarbons and drilling mud. Typical dimensions may be approximately 130-feet wide by 150-feet long by 12-feet deep, although specific configurations vary by site. The cell may receive only drilling and production wastes associated with the exploration, development or production of crude oil, natural gas or hydrocarbon- contaminated solids. The disposal of hazardous or other waste in a containment cell is prohibited. After the well is deepened, the residue in the reserve pit is often dewatered and the fluids are injected into the well annulus. An inventory of injection operations, including volume, date, type and source of material injected is maintained by requirement. Following completion of well activities, the material remaining in the pit is permanently encapsulated in the impermeable liner. Fill and organic soil is placed over it and proper drainage is reestablished. Surface impoundment's within 1,500 feet are sampled on a periodic basis and analyzed. In addition, groundwater-monitoring wells are drilled and sampled on a regular basis. If there are uncontained releases during operations, or if water samples indicate an increase in the compounds being monitored, additional observation may be required.

Substances proposed for disposal classified as "hazardous" undergo a more rigorous and thorough permitting and review process by both ADEC (18 AAC 62 and 63) and EPA.

d. Air Quality Control Permit to Operate

The federal Prevention of Significant Deterioration (PSD) program, which is administered by ADEC, establishes threshold amounts for the release of byproducts into the atmosphere. Oil and gas exploration and production operations with emissions below predetermined threshold amounts must still comply with state regulations designed to control emissions at these lower levels (18 AAC 50). Activities

which exceed pre-determined PSD threshold amounts are subject to a more rigorous application and review process. Such activities include the operation of turbines and gas flares.

For oil and gas activities, these requirements translate into the requirement for a permit to flare gas during well testing (a safety measure) or when operating smoke-generating equipment such as diesel-powered generators. Permit conditions will induce additional scrutiny if a black smoke incident exceeds 20 percent opacity for more than 3 minutes in any 1-hour period.

The burning of produced fluids is prohibited unless failures or seasonal constraints preclude storage in tanks, backhauling or re-injection. If liquids are to be incinerated, they must be burned in smokeless flares. The open burning of produced liquids is prohibited except under emergency conditions.

Gas produced as a by-product of oil production is usually re-injected into the producing formation to maintain pressure, which supports further production. Flaring is not an approved method of disposal, however, as a safety measure and backup for standard gas handling systems production facilities, which separate gas from oil, are capable of flaring large volumes of gas. Flaring occurs when the oil and gas separation process is interrupted, or when an unplanned event requires an immediate release from pressure increases. Pilot flares are an operational necessity; they are also subject to permit requirements.

e. 401 Certification

Under 18 AAC 15.120, a person who conducts an operation that results in the disposal of wastewater into the water of the state need not apply for a permit from ADEC if the disposal is permitted under an NPDES permit. When an NPDES permit is issued under Section 401 (33 U.S.C. § 1341) of the Clean Water Act, ADEC does not require a separate permit, but participates by certifying that the discharge meets state and federal water quality standards.

When an application is made, a duplicate must be filed with the department and public notice of the certification application is published jointly by EPA and ADEC. 18 AAC 15.140 and 40 C.F.R. § 125.32. As a result, the state and federal reviews run concurrently. Public comment is sought and a hearing can be requested.

Following an EPA determination, but within 30 days, the department must provide the applicant, EPA, and all persons who submitted timely comments with a copy of the certification. The decision may impose stipulations and conditions (such as monitoring and/or mixing zone requirements), and any person disagreeing with the decision may request an adjudicatory hearing. 18 AAC 15.200 - .920. Once activity begins, both EPA and the department have the responsibility to monitor the project for compliance with the terms of the permit.

The Corps of Engineers 404 permit program (see Corps of Engineers) also requires certification under section 401 of the Clean Water Act and it is processed in a similar manner. The ADEC certification is termed a Certificate of Reasonable Assurance.

f. Review Process

Following receipt of an application for a solid waste disposal, wastewater, or air quality permit, ADEC must publish two consecutive notices in a newspaper of general circulation in the area affected by the proposed operation, as well as through other appropriate media.

Comments must be submitted in writing within 30 days after the second publication and a public hearing may be requested. A hearing will be scheduled if good cause exists. Notice of a public hearing is handled in a manner similar to that of the initial application.

A decision on an application includes (1) the permit, (2) a summary of the basis for the decision and (3) provisions for an opportunity for an adjudicatory hearing. 18 AAC 15. The decision, as conditioned, is sent to the applicant as well as each person, or entity, who submitted timely comments or testified at a public hearing. Permits may be valid for up to five years. Renewals are treated the same as the original application, but they do not receive public notice.

4. Alaska Department of Fish and Game

ADF&G analyzes the effect of any activity on fish and wildlife, the users of those resources, and the protection of habitat. ADF&G requires permits for any activity in state game refuges, sanctuaries, critical habitat areas, and streams that contain anadromous fish, as well as other areas the agency believes might be threatened by development. Management plans control activities within many legislatively designated areas. By statute these areas are jointly managed with ADNR. Permits are conditioned to mitigate impacts. For example, timing restrictions may be used to limit the impact on transitory fish or wildlife.

a. Fish Habitat Permit

Title 16 gives ADF&G permitting authority over activities affecting anadromous fish streams, or that could block anadromous or resident fish passage. The Fishway Act (AS 16.05.840) requires that an individual or governmental agency notify and obtain authorization from the ADF&G for activities within or across a stream used by fish if the department determines that such uses or activities could represent an impediment to the efficient passage of fish. Culvert installation, stream realignment or diversions, dams, low-water crossings, winter ice road crossings, and construction, placement, deposition, or removal of any material or structure below ordinary high water all require approval from ADF&G.

The Anadromous Fish Act (AS 16.05.870) requires that an individual or governmental agency provide prior notification and obtain approval from the ADF&G "to construct a hydraulic project or use, divert, obstruct, pollute, or change the natural flow or bed" of a specified anadromous waterbody or "to use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed" of a specified anadromous waterbody. All activities within or across a specified anadromous waterbody and all instream activities affecting a specified anadromous waterbody require approval from the ADF&G, including construction, road crossings, gravel removal, water withdrawals, the use of vehicles or equipment in the waterway, stream realignment or diversion, bank stabilization, blasting, and the placement, excavation, deposition, disposal, or removal of any material.

b. ADF&G Special Area Permit

For any habitat-altering work, including any construction activity, in a legislatively designated refuge, sanctuary, or critical habitat area, a special area permit is required. AS 16.20 and 5 AAC 95. The study area encompasses nearly all of the Minto Flats State Game Refuge (MFSGR). Permitting requirements and procedures are specified in 5 AAC 95.400 — .990.

c. Review Process

Most permit actions subject to ADF&G require less than a 30-day review unless surface occupancy issues or other related permits require additional time. An informal review is conducted with the departments of Natural Resources and Environmental Conservation as well as any affected coastal districts. Public notice and hearings are not usually required for ADF&G permit actions.

Permit decisions are based upon proper protection for fish and game, and can include suggestions provided by area staff, the commenting agencies, and applicable coastal districts. Special area permits are approved, conditioned, or denied on the basis of the standards presented in 5 AAC 95.430. Fish habitat and special area permits may be appealed through procedures described in the Administrative Procedure Act (AS 44.62.330 — 44.62.630).

5. Alaska Oil and Gas Conservation Commission

AOGCC administers the Alaska Oil and Gas Conservation Act under Title 31. The AOGCC may investigate to determine whether waste of oil and gas resources exists or is imminent. It is also responsible for ensuring that accurate metering and measuring of oil and gas production takes place.

The commission maintains programs to ensure that the drilling, casing and plugging of a well occurs in a manner that prevents (1) escapement from one stratum into another, (2) the intrusion of water into an oil or gas horizon, (3) the pollution of fresh water supplies, and (3) blowouts, cavings, seepage and fires. For conservation purposes, the commission regulates certain aspects of the drilling, production, and plugging of wells in addition to well spacing, the disposal of salt water and oil field waste and the contamination of underground water.

Reports, well logs, drilling logs and other information must be filed with the commission for each well drilled. The information is confidential until the land from which the data were acquired is no longer subject to an exploration license, or, if converted to a lease, for two years after conversion or until the lease expires, whichever is first

a. Permit to Drill

Before drilling, a Permit to Drill, valid for 24 months, must be obtained from the commission. AS 31.05; 20 AAC 25. The permit application informs the commission of a proposed operator's engineering and safety plans designed to ensure the structural and mechanical ability of the well to contain fluids and gases that could be encountered at various depths and under varying pressure.

With the application, a diagram of the proposed blowout prevention (BOP) equipment (used for secondary well control) must be included with an analysis of expected down-hole pressures. A BOP, along with related well-control equipment, must be installed, used, maintained and tested as necessary to assure control over the well and conform to the latest technology and accepted industry practice.

Casing, cementing, and drilling fluid programs are also designed to ensure primary well control. A drilling fluid monitoring program must be in place to detect gases entrained in the drilling fluid and detect Hydrogen Sulfide, a poisonous gas.

For exploration wells, a well-site survey is conducted using seismic techniques. The data from the seismic survey are analyzed to detect shallow gas in near-surface strata to a depth of 2,000 feet and the

depths of suspected over-pressured strata are predicted. For offshore wells, an analysis of seafloor conditions is required.

If climatic conditions and operational or environmental concerns become apparent, or if unplanned-for circumstances prevent the continuation of an approved program, an operator can secure a well and apply for an operational shut down. When a well is abandoned, plans for setting plugs, mudding, cementing, shooting, testing, and removing the casing must be submitted to AOGCC for approval. Abandoned or suspended wells may remain that way for long periods of time. Until final plans are made, the commission seeks to prevent the movement of fluids into or between freshwater and/or hydrocarbon sources.

Before beginning to drill, an operator must post a bond for \$100,000 in favor of the state for a single well, or \$200,000 for a blanket bond covering more than one well. The purpose of the bond is to ensure that a well is properly completed or abandoned.

After abandonment, a location clearance is required. For onshore locations, materials, supplies, structures, and installations must be removed, debris properly disposed of, and the reserve pit filled and graded. The location must be left uncontaminated, in a clean condition acceptable to state inspectors. Off-shore locations must have all casing, wellhead equipment, pilings, and other structures removed to a depth of 15 feet below the mud line.

b. Annular Injection

If fluid is to be injected into a well annulus, a permit is required. ADEC considers the volume, depth and other physical and chemical characteristics of the formation designated to receive the waste. Injection is not permitted into water-bearing zones where dissolved solids or salinity concentrations fall below predetermined threshold limits. Waste not generated from a hydrocarbon reservoir cannot be injected into a reservoir.

c. Disposal of Wastes

AOGCC must also review and approve proposals for the underground disposal of water and oil field waste. 20 AAC 25.252. Before receiving an approval, an operator must demonstrate that the movement of fluids into freshwater sources will not occur. Disposal must be into a well with equipment designed to ensure a controlled release. A plat is required showing the location of other wells within 1/4-mile that penetrate the same disposal zone, and surface owners (located within 1/4-mile) must be provided with a copy of the application.

Included with a description of the fluid to be injected (with its composition, source, daily amount and disposal pressures), the application must contain the name, description, depth, thickness, lithologic description and geological data of the disposal formation and adjacent confining zones. There must be evidence presented that the disposal well will not initiate or propagate fractures through the confining zones that would allow fluids to migrate, a laboratory analysis is required. Under certain circumstances, however, a fresh water aquifer exemption may be granted. 20 AAC 25.440.

Following approval, liquid waste from drilling operations may be pumped into a well drill pipe, casing or annulus. The pumping of drilling mud from reserve pits (not runoff) into exploration or stratigraphic test wells or into the annuli of a well approved in accordance with 20 AAC 25.080 is an operation incidental to drilling of the well, and is not a disposal operation subject to regulation as a Class II well under EPA regulations.

d. Review Process

Actions by the commission that have statewide application (such as adopting regulations) are conducted in accordance with the Administrative Procedures Act. Major actions, resulting in conservation orders that apply to a single well or field, receive public notice by publication in a newspaper. 20 AAC 25.540. In addition, a mailing list is maintained for the purpose of sending notices, orders or publications to those who request them. There are different lists for different purposes.

6. U.S. Environmental Protection Agency

a. NPDES Permit

The federal Clean Water Act requires a National Pollution Discharge Elimination System (NPDES) permit to release pollutants into the waters and wetlands of Alaska. The permitting system is designed to ensure that discharges do not violate state and federal water quality standards by identifying control technologies, setting effluent limitations, and gathering information through reporting and inspection.

Typically, approved discharges are covered by a general permit developed through a public review process after the EPA in an Authorization to Discharge has identified the specific location of a proposed discharge. When a general permit for a specific geographical area does not exist, proposed discharges are subject to an individual approval process and NPDES permit.

A NPDES permit covers the discharge of drilling muds, cuttings and wash water, as well as deck drainage, sanitary and domestic wastes, desalination unit waste, blow-out preventer fluids, boiler blowdown, fire control system test water, non-contact cooling water, uncontaminated ballast and bilge waters, excess cement slurry, water flooding discharges, produced waters, well treatment fluids and produced solids.

b. Review Process

Discharges needing authorization before a general permit is issued require individual permits. 40 C.F.R. § 122. Once EPA receives an application for a proposed discharge, a draft permit and fact sheet is prepared to address the proposal. Public notice solicits comments and provides notification of state certification under section 401 of the Clean Water Act.

There is a minimum period of 30 days for public comment and all comments received must be in writing. Public hearings, if scheduled in the original notice, will be canceled if there is no interest in holding them; however, anyone can request a hearing.

An individual permit will not take effect for 30 days, during which time an aggrieved party who earlier submitted written comments may request an evidentiary hearing. EPA will respond by issuing a finding identifying the qualifying issues to be decided before an adjudicatory law judge. For general permits, notice must be published in the Federal Register and issuance may be challenged for 120 days. 40 C.F.R. § 124.

A permit will not be issued unless ADEC certifies that the discharge will comply with the applicable provisions of the Clean Water Act. The certification process is addressed in an agreement

between EPA and ADEC. Persons wishing to comment on a state consistency determination or 401 certification must submit written comments within the 30-day comment period.

c. Typical Permit Requirements

Only pre-approved discharges may be released and each must be emitted in accordance with an effluent limitation designed for that particular emission at that point of discharge. After it is issued, the permit will be modified or revoked if new information justifies different conditions, or if new standards are promulgated that are more stringent than those in the original approval. For example, existing permits prohibit discharges within 1,000 m of river mouths, and specially designed monitoring programs are required within 1,500 m of areas considered sensitive.

In all cases, mixing zones are established at the discharge point and produced waters are passed through at least one oil separator before discharge. Under certain conditions verification studies may be required of the mixing zone; discharge limitations are then applied as the emission passes through the mixing zone.

Only pre-approved drilling muds, specialty additives and mineral oil pills may be discharged; and maximum concentrations are specified. For each mud system, a precise chemical inventory of its constituents is maintained. Free oil or oil-based muds (those containing oil as the continuous phase, with water as the dispersed phase) may not be discharged at any time. The oil content of a discharge must be analyzed (1) at the time the fluid or additive is used, (2) when a drilling fluid could become contaminated with hydrocarbons from an underground formation, and (3) immediately when the static sheen test of a discharge indicates violation. Water-based drilling fluids that have contained diesel oil or cuttings associated with muds that contain diesel oil may not be discharged. In state waters, the discharge of cuttings with an oil volume greater than 5 percent by weight, or the discharge of free oil as a result of discharging drilling muds or cuttings is prohibited as well. A static sheen test is performed daily on emission samples as well as prior to any bulk discharge. Generally, the discharge of floating solids or visible foam is not allowed. Surfactant, dispersant and detergent discharges are minimized, but may be allowed to comply with occupational health and safety requirements. In all cases, deck drainage and wash water must go through an oil/water separator; the effluent is tested and any discharge that would cause a sheen on the receiving waters is prohibited.

d. C-Plan

Owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing or consuming oil and oil products must prepare a spill prevention control and countermeasures plan in accordance with 40 C.F.R. § 112. Drilling rigs are included in this facility definition. The purpose of the c-plan is to prevent discharges of oil into navigable waters of the U.S. and the adjoining shorelines. The plan must address three areas:

- operating procedures installed by the facility to prevent oil spills;
- control measures installed to prevent a spill from entering navigable waters; and
- countermeasures to contain, cleanup and mitigate the effects of an oil spill that impacts navigable waters.

The c-plan is facility-specific and is part of the required documentation that must be present at the facility for inspection. The owner or operator must have the plan certified by a registered engineer but does not submit it to EPA for approval prior to the beginning of operations. If the facility discharges more

than 1,000 gallons or harmful quantities of oil in one event or experiences more than two discharges in a twelve-month period, the operator must submit the c-plan to the EPA and ADEC for review. The c-plan differs from the facility response plans (FRP) required by OPA 90 in that the c-plan focuses on prevention and the FRP focuses on response.

7. U.S. Army Corps of Engineers

The Department of the Army regulatory program is administered by the U.S. Army Corps of Engineers (Corps). The program is authorized by section 10 of the Rivers and Harbors Act of 1899, section 404 of the Clean Water Act, and section 103 of the Marine Protection, Research and Sanctuaries Act. The permit program authorizes activities in, on, or affecting, navigable waters as well as the discharge of dredge or fill into waters of the United States. For purposes of administration, waters of the United States include wetlands. The most common oil and gas activity requiring a Corps permit is the discharge or placement of fill, generally gravel or ice, on "wetlands."

The EPA and the Corps jointly administer the 404 Program. The Corps performs the day-to-day permitting and enforcement functions (including individual permit decisions) and jurisdictional determinations, while EPA develops and interprets environmental criteria to be used in the evaluation of permit applications. The 404(b)(1) guidelines are EPA regulations; as a result, they can (and have) exercise veto authority over permit decisions made by the Corps.

a. Section 10 of Rivers and Harbors Act of 1899 (33 U.S.C. § 403)

If work is anticipated on or in (or affects) navigable waters, a Corps permit is required. A section 10 permit addresses activities that could obstruct navigation. Oil and gas activities requiring this type of permit would be exploration drilling from a backup drill rig, installation of a production platform, or construction of a causeway. The process and concerns are similar to those required for section 404 approval and, at times, both may be required.

b. General Permits

Some oil and gas activities undergo individual project reviews. Under this process, projects are evaluated on a case-by-case basis and a public interest determination is conducted. 33 C.F.R. § 320. The Corps issues general permits that carry a standard set of stipulations that cover frequent, repetitive and similar activities when, individually and cumulatively, there will be a minimal environmental effect. A general permit describes the activity covered and includes appropriate proposed stipulations and mitigation measures. This type of permit generally has a geographical limitation. There are 36 nationwide general permits, while the Alaska District has 21.

c. Letters of Permission (LOP)

LOPs are a type of permit that, once approved for issuance after a public review process, undergo individual, but abbreviated reviews. These activities are routine and have been determined to have no significant environmental effect. In Alaska, LOPs are used only for activities that might have an effect on navigable waters under section 10.

d. Review Process

Upon receipt of an application, the Corps solicits comments from the public, federal, state and local agencies as well as other interested parties. They seek comments to assess the impact of the proposed activity on aquatic resources, endangered species, historic properties, water quality, environmental effects and other public interest factors. Most public comment periods last 30 days and a public hearing can be requested.

The U.S. Fish and Wildlife Service, National Marine Fisheries Service and ADF&G submit comments to the Corps in accordance with the Fish and Wildlife Coordination Act. Their comments address compliance with section 404(b)(1) of the Clean Water Act as well as the measures they consider necessary for the protection of wildlife resources. Under the Endangered Species Act of 1973, endangered species that frequent the area are identified and the effect the proposed activity might have on them or their habitat is considered. In some cases, an environmental assessment or environmental impact statement may be required by the National Environmental Policy Act.

An application to the Corps serves as an application to ADEC for state water quality certification as required under section 401 of the Clean Water Act of 1977 (P.L. 95-217), and must be reviewed by EPA. The application is reviewed against the Act, the Alaska Water Quality Standards and other applicable state laws. For placing fill in wetlands, water quality stipulations included in the 401 Certification become part of the Corps permit (see ADEC 401 Certification).

The public interest review (33 C.F.R. § 320.4) considers guidelines set forth under section 404(b) of the Clean Waters Act. The guidelines outline a mitigation sequence that must be followed in the decision-making process, which applies, to all waters, including wetlands. A permit will be denied if the contemplated discharge does not meet the required standards. For placement of fill, the mitigation sequence requires avoiding wetlands where practical, minimizing impact where avoidance is not practicable, and compensating for impact to the extent appropriate and practicable.

In addition, a review of cultural resources is coordinated with the state's Historic Preservation Office. Archeological or historical data that could be lost or destroyed by the proposed activity is considered and presented in the Corp's final assessment of the described project.

A decision to issue a permit, with proposed mitigation measures included, is based upon an evaluation of the probable impacts (including cumulative impacts) of a proposed activity. Benefits that can reasonably be expected to accrue are balanced against reasonably foreseeable costs. Factors relevant to the decision are conservation, economics, aesthetics, general environmental concerns, wetlands, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, property ownership and, in general, the needs and welfare of the people.

8. Other Requirements

Licensees must comply with applicable federal law concerning Native allotments. Activities proposed in a plan of operations must not unreasonably diminish the use and enjoyment of lands within a Native allotment. Before entering onto lands subject to a pending or approved Native allotment, licensees must contact BIA and BLM and obtain approval to enter.

Upon expiration or termination of the license, paragraph 16 of the license agreement requires the lessee to rehabilitate the license area to the satisfaction of the state. The licensee is granted one year from

the date of expiration or termination to remove all equipment from the license area and deliver up the license area in good condition.

In addition to existing laws and regulations applicable to oil and gas activities, DO&G requires, under paragraph 21 of the license agreement, that a license be subject to all applicable state and federal statutes and regulations in effect on the effective date of the license. A Nenana basin license will also be subject to all future laws and regulations placed in effect after the effective date of the license to the full extent constitutionally permissible and will be affected by any changes to the responsibilities of oversight agencies.